

Patent claims

1. Multi-layered cylinder head seal with a spacing layer (6) that has openings (2) corresponding to the number of combustion chambers taking cylinder bushings in a combustion engine, in the area of which a combustion chamber edging (3, 15,16) containing a soft iron ring (17) is located, and in the edge areas (1, 1', 1'') at least partially limiting elements (5) are provided, where the spacing layer (6) is in functional contact with functional layers (7, 8, 9 10) that have several selectable distances from both the associated combustion chamber edging (3, 15,16) as well as the associated limiting element (5) and that are provided with sumps (11, 12, 13, 14).
2. Cylinder head seal per claim 1, characterized in that the functional layers (7, 8, 9, 10) are provided with half sumps (11, 12, 13, 14).
3. Cylinder head seal per claim 1 or 2, characterized in that at least one functional layer (7, 8, or 9, 10) is positioned in the area of each frontal surface of the spacing layer (6),
4. Cylinder head seal per one of the claims 1 to 3, characterized in that two functional layers (7, 8 or 9, 10) are positioned in the area of each frontal surface of the spacing layer (6), whose half sumps (11, 12, 13, 14) are provided in selectable areas touching each other, and in other selectable areas at a distance from each other.
5. Cylinder head seal per one of the claims 1 to 4, characterized in that the half sumps (11,12, 13, 14) are made open toward to the limiting elements (5).

6. Cylinder head seal per one of the claims 1 to 5, characterized in that the associated combustion chamber edging (3) is made of two sheet metal elements (15, 16), where the inner sheet metal element (16) accepts the soft iron ring (17) and both sheet metal elements (15, 16) are joined all around the spacing layer (6).

7. Cylinder head seal per one of the claims 1 to 6, characterized in that the combustion edging (3, 15, 16) is movable relative to the spacing layer (6) and is provided decoupled from both the spacing layer (6) as well as the functional layers (7, 8, 9, 10) in the area of each opening (2).

8. Cylinder head seal per one of the claims 1 to 7, characterized in that the functional layers (7, 8, 9, 10) are firmly connected to the spacing layer (6).